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CONTENTS

Behavioral Science Research Institute
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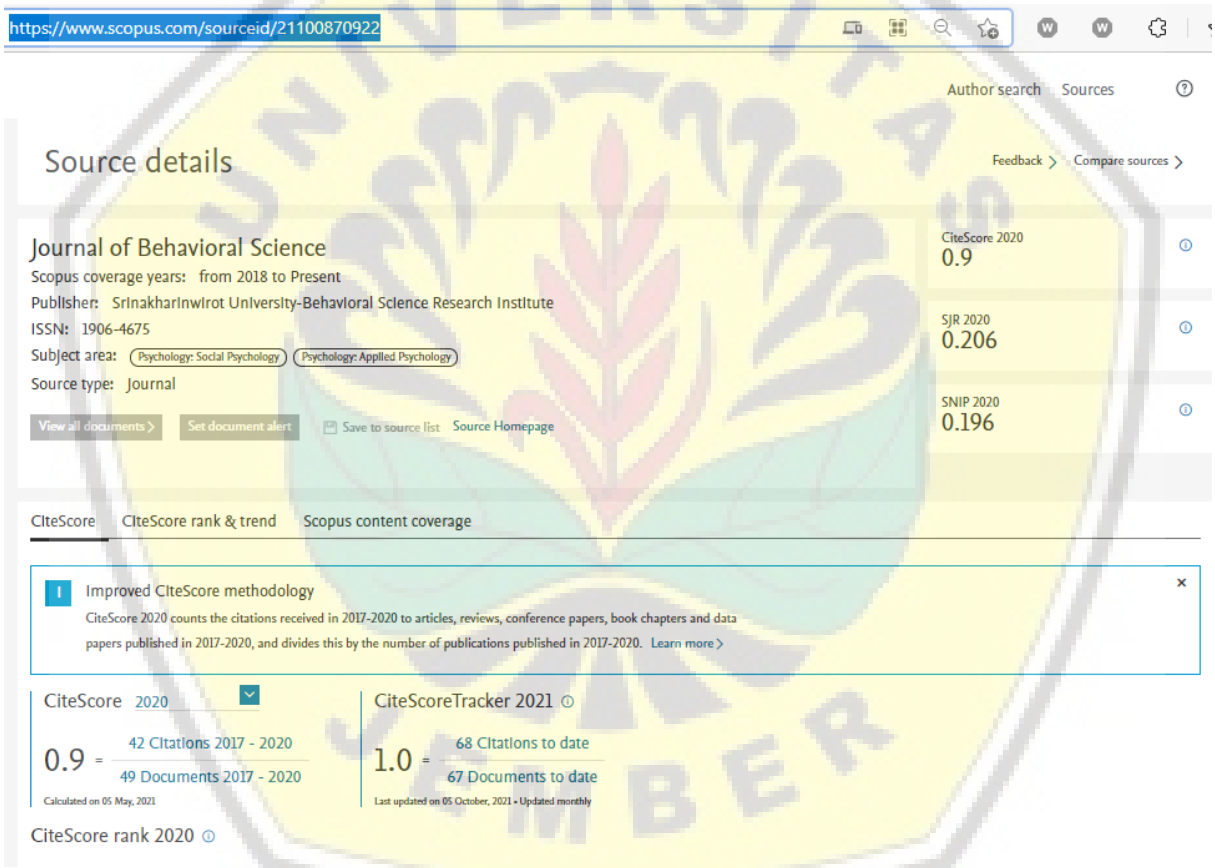
Behavioral Factors and Successful Implementation of Mandatory Management
The Journal of Behavioral Science (TJBS)
Internasional bereputasi
https://so06.tci-thaijo.org/index.php/IJBS/article/view/251642/170047
https://www.scopus.com/sourceid/21100870922



https://so06.tci-thaijo.org/index.php/IJBS/about/editorialTeam

THE JOURNAL OF BEHAVIORAL SCIENCE
ISSN: 1906-4675

Editorial Team

PDF

Factors Related to Healthy Aging among Older Persons

Warinthorn Arayasajapong, Sungwean Pinagalung, Piyawan Srisuruk, Suchat Paholpak, Korrawan Mongput

PDF

The Adoption of Protective Health Behaviors During the COVID-19 Pandemic in Thailand

Kedwadee Sombultawee, Sakun Boon-itt, Vipa Bussanit

PDF

Behavioral Factors and Successful Implementation of Mandatory Management Information Systems in Indonesia

Alwan Sri Kustono

PDF

Understanding Employee Performance During Work from Home in Indonesia

Christian Wiradendi Wolor, Aditya Pratama, Ayatulloh Michael Musyaffi, Ahmad Nurkhin, Yudin Citriadin

PDF

Causal Model of Talent Utilization, Engagement and Performance among Employees in the Seafood Processing Industry

Yuwadi Chunthasiri, Ungsinun Intarakamhang, Nattapong Kongprasert, Stuart C. Carr, Amanda M Young-Hauser

PDF

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Original Article

Behavioral Factors and Successful Implementation of Mandatory Management Information Systems in Indonesia

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Abstract

Information systems help local governments present quality financial statements. An understanding of the factors that influence successful implementation is crucial. This study examines antecedents of a management information system implementation in Indonesia. Data, using a questionnaire, was obtained 453 operators in East Java, one of the largest provinces in Indonesia. Validity and reliability testing showed that the questionnaire matched the common consensus criteria (each item greater than .07). Path analysis test results for usage behavior caused by self-efficacy (β = .69, *p* = .05), perceived complexity (β = -.34, *p* = .01), and intention to use (β = .39, *p* = .00). The determinants of usefulness are self-efficacy (β = .52, p = .00), and ease of use (β = .53, *p* = .00). One of the variables that affect attitude is usefulness (β = .18, *p* = .26). Intention of use influenced by self-efficacy (β = .69, *p* = .00), and attitude toward using (β = .46, *p* = .00). Self-efficacy affects perceived usefulness and behavioral intention to use, and ultimately affects actual system use. The Sobel test was utilized to examine the mediation function and the results shows that intention to use significantly mediates the relationship between the self-efficacy and usage behavior (Z = 3.9, *p* < .001). This study contributes to developing a new simple model to explain usage behavior in a mandatory information system where the intention to use could be important mediating variable.

Advances in information technology systems have made users of information technology systems adapt according to existing developments. Local governments must think about using information technology to manage regional finances and inform the public of government performance effectively, efficiently, and economically. Local governments are required to be able to produce quality regional financial statements. Therefore, a sound financial management system must manage finances accurately, timeliness, transparency, and accountability (Aswar, 2020).

Most local governments in Indonesia use management information system (MIS) applications to produce financial statements and are regulated as a mandatory system in the regions. The success of government MIS implementation has many factors. An important factor is the readiness and ability of local government staff to use it (Ordiyasa, 2015). Discussion of the determinants of successful implementation of the mandatory system is more appropriate if studied using an end-user behavioral approach. Behavioral aspects are widely used to explore the successful adoption of information systems technology in-depth and find the determinants variables (Nanggala, 2020).

The MIS applications have to direct impact on improving the quality of local government financial reporting. The use of new technologies has different levels of acceptance. The technology acceptance model (TAM) was first introduced by Davis et al. (1989, as cited in Le & Cao, 2020) as a model that uses usefulness and ease of use to explain factors affecting individuals' intention and behavior when using and accepting specific technology. This model uses the theory of reasoned action as the basis of the framework.

The TAM has been widely used to evaluate

users' acceptance and explain users' behavior by assessing the impact of information on users regarding trust, attitudes, and intentions. It provides a framework for understanding the factors that cause a new technology to be accepted and implemented. Certain factors influence the success of the implementation of new technologies. The use of information technology is influenced by ease of use and mediated by usefulness. TAM illustrates the degree to which a person believes their performance increase when using technology. In this framework, two personal behavioral variables determine acceptance, referred to as perceived usefulness and perceived ease of use (Muñoz-Leiva et al., 2017).

Perceived ease of use implies a new information system is assessed as easy to apply and does not require additional physical and mental effort. Perceived usefulness is when someone thinks that using a system increases performance and improves performance (Kustono et al., 2021; Sunny & George, 2018). In this relationship flow model, there are variables of attitude and behavioral intention to use, which mediate the effect of these two variables on actual use (Novariana & Andrianto, 2020).

The problems faced in the development of e-government at the central and local levels are interrelated with the development of infrastructure, leadership, human resources, and culture. As summarized in infrastructure problems, the availability of technology is often still an obstacle in developing countries. The successful implementation of e-gov in the local government strengthens the evidence of how important leadership and human resources are in determining the success of e-gov implementation and utilization (Ordiyasa, 2015).

Research on technology acceptance is still rarely carried out in local government areas. As a government employee, there is no alternative but to follow the existing regulations. Other studies generally only investigate the ease of use and usefulness variables without looking for the first causes that affect the individual's internal variables. A systematic literature review with keywords acceptance of technology, Indonesia, and local government for 2016 to 2021 only found 23 studies using TAM analysis totaling 15 studies. The developed model mainly focuses on testing the TAM variable and its user personality attributes.

Self-efficacy has been shown to affect individual performance. Studies have found evidence of a relationship between self-efficacy and TAM adoption (Pishchenko & Myriounis, 2016), participation (Hanif et al., 2018), managing behavior (Sukwatjanee, 2014), and performance (Merawati, 2019). Given the importance of self-efficacy for predicting usage behavior, this study argues the need for further research to thoroughly examine the role of self-efficacy in mandatory information system acceptance.

Efficacy is a product of a comprehensive cognitive process. Self-efficacy can regulate human cognition so that it has a positive behavioral impact. The perceived strength of self-efficacy will make a person set the best goals and strive to remain committed to that goal. The existence of self-efficacy integrated with the perception of environmental complexity is thought to affect the behavior of using computer technology. Self-efficacy is derived from perceived attribution and perceived complexity is a reasoned action initiative.

This integrated behavioral framework provides a comprehensive basis for describing behavioral and affective reactions to computing technology. This framework assumes that technology acceptance is influenced by individual factors and support from the environment, namely self-confidence and perception complexity. Self-confidence is derived from perceived attribution and perception of complexity is a reasoned action initiative. The results explain and predict management information technology acceptance when a system is implemented, treated as a system mandatory, and run out to complete local government administrative work.

Usage behavior measurement is based on interrelated aspects of computer science, local government financial reporting systems, and behavioral aspects of end-users who operate MIS applications. This interrelation raises the possibility of a moderating effect on a person's acceptance of the system. The computer gives a different response for each individual. Combining the challenges of using new information systems and the need for local government financial reporting creates specific pressures.

This research is necessary because it examines the implementation of information systems imposed by regulation. This mandate makes the quality factor and system quality no longer a determinant of implementation success but makes attribution behavior factors and reasons act as determinants of variables. An understanding of exogenous variables can be used for local government when implementing a new information application system.

The theoretical contribution is the contingency integration paradigm that exploration of human behavior cannot be done with a single alone theory but must integrate behavioral theory comprehensively.

This study uses a behavioral contingency approach that integrates the TAM and the attribution variables. In the integration perspective, perceptions of external situations and beliefs about individual abilities will affect task acceptance. The contingency approach identifies and measures situational and personal factors that simultaneously affect and interact under certain conditions. This theory is based on the fact that individuals do not have the freedom to choose but can still have their own opinions to use mandatory information systems. In other words, his belief in something mandatory is a crucial factor in forming an attitude of accepting its implementation.

Literature Review

Attribution theory argues that a person's behavior is determined by a combination of internal and external forces. Behavior caused by internal forces is believed to come from within the individual's personality, such as ability, knowledge, and effort. External behavior results from pressure in certain situations or circumstances that forces a person to take specific actions. These two factors play an important role because they affect individual behavior. This theory is in line with the theory of reasoned action. A person's intention to perform a behavior determines whether the behavior will be carried out or not (Echchabi et al., 2019).

In the attribution perspective, system usage is the proper behavior to measure the success of an information system implemented by an organization. This information system usage shows the user's decision to use the information system in completing his tasks. The user's self-efficacy influences it. Self-efficacy is defined as the level of belief that a person can perform certain behaviors (Nawangsih, 2020). Self-efficacy means that a user has the confidence to use technology systems to complete work and carry out their duties.

Information system users who have confidence in their abilities will be more motivated to work. They have confidence in their expertise in using information systems. With this belief, users dare to retry their work if they fail. Over time they can become more skilled. Users who have self-efficacy will operate, access easily and quickly, produce information, turn data into useful information, store data, and process-related information system features (Awofala et al., 2019; Larasati, 2017). They will tend to use the information system more optimally.

The two variables are thought to explain the changes that occur in the information technology acceptance variables. Self-efficacy is assumed to affect usefulness. Echchabi et al. (2019) show that self-efficacy has a significant positive effect on the intention to use e-banking services. These results are also supported by (Awofala et al., 2019; Ferdousi, 2019; Gbongli et al., 2019). They conclude that a higher self-efficacy induces a more active learning process.

Self-efficacy has assumed actual influence usage. Previous research showed that self-efficacy significantly affects both variables (Al Kurdi et al., 2020; Echchabi et al., 2019; Ferdousi, 2019). These findings are also in line with Gbongli et al. (2019) regarding self-efficacy significantly affects e-banking services.

H1: Self-efficacy positively affects the usage behavior of management information systems in local governments.
H2: Self-efficacy positively affects the perceived usefulness of management information systems in local government.
H3: Self-efficacy positively affects the perceived ease of use of management information systems in local government.

The system's perceived complexity is the relativity level of the difficulty felt in using the information system developed by the company. User influence on decision-making is connected with system development in the design and implementation stages. Perceived complexity is defined as a level of perceived innovation that is relatively difficult to understand and use. The more complex the creation, the lower the acceptance. There is a negative relationship between perceived complexity and utilization of information technology systems. Zarei et al. (2019) obtained that perceived complexity has a negative but significant effect on the use of information technology. The more complex the information technology, the lower the information technology system's utilization. Users who consider the information system to be complex see that the operating mechanism is also complicated

so that it is not efficient in completing tasks.

The perceived complexity level is measured by computer technology's difficulty to be understood and used by users. The perceived complexity of an MIS at local government is why users are reluctant to use it because they spend a long time in its application. According to research conducted by Zarei et al. (2019) that concluded perceived complexity affects usefulness. Other studies also support that results in perceived complexity level have a significant effect on usefulness and actual usage (Al Rahmi et al., 2019; Gomes et al., 2019). The other research predicted an impact on perceived usefulness (Elshafey et al., 2020; Ji et al., 2019; Jimenez et al., 2021; Kang et al., 2021). They showed that perceived complexity affects usefulness and actual usage.

H4: Perceived complexity negatively affects the usage behavior management information systems in local government.

H5: Perceived complexity negatively affects the perceived usefulness of management information systems in local government.

In the concept of TAM, ease of use affects usefulness. Ease of use is defined as a measure of someone believing that information technology systems are easy to understand and use. End-users feel confident and believe that using a particular technology system does not require much effort or action. If someone thinks that the system is easy to understand, learn, and operate, someone reacts positively to the system. Information technology systems are more useful if there is the ease of use. Conversely, if someone feels that the system cannot be understood, studied, and operated, he cannot accept the technology system and not use it. Some indicators of the ease of use of information technology include: computers are easy to learn, computers can do tasks easily as desired by their users, computers can quickly improve user skills, and ease of operation. The ease of use influences the attitude of individuals in accepting new technology. If the individual feels the technology is easy to use and learn, it will encourage users to use it (Nanggala, 2020).

Ease of use is one of the technology functions that can increase the attitude to use information technology (Kustono & Valencia, 2017). Perceived ease of use is considered a measure of user confidence that using information technology can improve job performance. MIS users' attitude to local governments is driven by how much user confidence using information systems can improve their performance. The use of information technology can improve job performance. If users believe that it is easy to use information technology, they will use information technology to improve their performance. Saadé et al. (2017) explain a significant positive influence between perceived ease of use and usefulness. It supports previous research that stated that perceived ease of use significantly positively affects system information usage (Kustono, 2020; Wong & Mo, 2019).

H6: Perceived ease of use positively affects the perceived usefulness of management information systems in local governments

H7: Perceived ease of use encourages positively affects the attitudes to use management information systems in local government

Perceived usefulness is the individual's confidence to the extent that someone gets a better use. Usefulness is defined as a condition where someone believes that using a system will be useful for himself. Conversely, it will not be used if a system is deemed useless. It is a belief that someone believes that the use of certain technologies can improve work performance. Usefulness is considered to influence attitudes and intention to use. The better usefulness, the higher the intention to use information systems. It illustrates using an information system technology to increase productivity, performance, effectiveness, and overall usability.

Previous research found perceived usefulness affects attitude toward using (Liao et al., 2018; Ma et al., 2017). The variable is a vital construct that influences attitudes, intentions, and behavior in using technology. If the individual considers the technology to have a better ability and can help the user do his work, the user will use the technology even though it is challenging (Cigdem & Ozturk, 2016; Kustono & Valencia, 2017). Other research also found results that support the same conclusion (Nagy, 2018; Suana, 2018).

H8: Perceived usefulness positively affects the attitude toward using management information systems in the local government.

Intentions and attitudes are the basis for assessing the system's acceptance. The behavior exhibited by someone arises because of attitude and the intention to use. The system is accepted or rejected due to a person using it to complete their work. Assessment of the user's intention will also motivate other users to continue to use the technology and information systems. A positive attitude will represent individual intentions in using technology and information systems to lead users' responses (Al Kurdi et al., 2020).

Behavioral intention to use information technology systems can be interpreted as behavior that continuously uses information systems. The intention is also the most critical part of the decision to accept the plan or reject it.

The usage behavior assessment explains an influence on repeated or frequent user intention in information technology systems. Someone feels satisfied if information technology systems are easy to use and can increase productivity, reflected in usage behavior conditions (Brusso, 2015). Usually, in the use of information systems technology, it can be seen from the amount of time and frequency when using the system. Some research found that intention to use affects actual usage (Kustono et al., 2021; Wong & Mo, 2019).

H9: Attitude toward using positively affects the intention to use a management information system in the local government.

H10: Intention to use positively affects the usage behavior of a management information system in the local government.

Method

The population of this research was the staff who operate the MIS at the local government in East Java, Indonesia. East Java represents the characteristics of Indonesia because it is a large province with geographical diversity and a mixed culture of several ethnic groups in Indonesia. The sample is a portion of the population or a selected number of members of the population. Sampling uses the purposive method for sampling. The sample is MIS users at the local government.

East Java is divided into 29 regencies and nine cities, with Surabaya as the provincial capital. It makes East Java a province that has the largest number of districts/cities in Indonesia. The number of MIS user is approximately 1700 staff.

Measurement

The research questionnaire was grouped into two groups. The first part contains the demographic data of the respondents. The demographics section includes the name (optional), local government origin, age, position, length of time using the local information system. The second group discusses the research variables.

Respondents were asked to state themselves on a perception interval scale with a 5-point scale (disagree very much, disagree, neutral, agree, and agree very much). Ten items measure self-efficacy (Karsten et al., 2014), and five items measure perceived complexity (Zarei et al., 2019). The TAM measurement variable follows the Venkatesh and Bala instruments with certain modifications (Kustono et al., 2021; Venkatesh et al., 2003).

Modification of the instrument was carried out to produce each variable for ease of use (3 items), usefulness (4 items), attitude (4 items), intention (6 items), and usage (4 items). Perceived usefulness measures user belief that using the MIS increases an individual's performance in completing work. Perceived ease of use is a measure by which users believe that MIS can be used easily and are free from problems. Attitude toward using is a user's attitude accepting or rejecting the MIS use in completing their work. Intention to use is a tendency as an end-user behavior that cannot stop using the MIS. Usage behavior describes the will always to use the system to get their work done.

Procedures

The research instrument was tested for the validity of its contents by carrying out preliminary discussion procedures and prototype studies. Three experts and two linguists experienced in behavioral and information systems review research instrument items developed from previous research and provided revisions for improvement.

The final result of the revised questionnaire was pilot-tested on 10 (ten) staff from association of Indonesian accounting practitioners (AIAP) who have experience in information systems and technology. The pilot-test results were then tested for reliability and validity under the supervision of the research committee of the AIAP. The pilot-test results showed that the correlation between items from the variable dimensions with the lowest total showed a Pearson correlation value of .81. Tests using Cronbach's Alpha showed the lowest score of .72 and were considered quite reliable.

The questionnaire used Google form and was distributed from January 02 to March 30, 2021, in the local government of East Java province. For each questionnaire, respondents were asked to express their agreement that the data would be used for analysis. The distribution uses snowball methods to fill using messenger to key-respondents in 38 local governments to distribute to MIS operators in their districts or cities. It was carried out by contacting local government officials to communicate the google form questionnaire link to MIS operators in their respective regions.

Local government MIS users were 1700 staff. Using Slovin's formula, confidence level 95%, with a margin of error of 5%, the minimum number of samples is 314. Questionnaires were then distributed via a google form in January – March 2021. The completed statement is designated as a sample for further analysis. Regions in East Java have characteristics of MIS implementing employees, both culturally and with access to homogeneous technology, so there is no need for a sampling quota for the origin of the district.

Results

Questionnaire distribution via snowball method with information on initial acceptance is 30% of the population, so the expected number is 510 responses. Four hundred sixty-seven (467) returned questionnaires, with 14 incomplete, so that number of samples taken was 453 end-user of MIS. The response rate of the estimated target respondents is 88%. The respondents involved came from various local governments in East Java. East Java is divided into 5 Regional Coordinating Boards (Bakorwil). The percentage of respondent origin is Bakorwil 1 (18%), Bakorwil II (25%), Bakorwil III (21%), Bakorwil IV (19%), and Bakorwil V (18%). All local government locations in East Java Province have been proportionally represented in this study. The sample is representative of all regions.

The results of the internal consistency test show that the items meet the validity criteria. Each item is correlated with a total score of more than .5 and a p value of less than .05. These results show in Table 1 and confirm that the questionnaire is valid and can be used for analysis.

Table 1
Validity Testing - Outer Loadings

	Perceived complexity	Self-efficacy	Intention	Ease of use	Useful-ness	Attitude	Usage behavior
Item 1	.84	.82	.78	.62	.75	.85	.69
Item 2	.64	.62	.81	.92	.69	.70	.79
Item 3	.94	.92	.84	.67	.67	.87	.64
Item 4	.64	.62	.79		.88	.78	.60
Item 5	.71	.61	.76				
Item 6		.89	.75				
Item 7		.60					
Item 8		.79					
Item 9		.66					
Item10		.65					

The outer loading or loading factor value is used to test the convergent validity. Outer loading values between .50 and .60 are considered sufficient to meet the convergent validity requirements. The result indicates no variable indicator whose outer loading value is below .50, so all indicators are valid. The research variables met the criteria for discriminant validity.

Reliability testing was carried out with Cronbach's alpha (Shahmohammadi, 2017). Perceived complexity (.81), self-efficacy (.75), ease of use (.78) usefulness (.72), attitude (.83), intention to use (.76), and usage behavior (.70). A variable meets the reliability if it has a composite reliability value > .60. The reliability test results showed that Cronbach's alpha value was more significant than .70. Usage behavior has a lower Cronbach's alpha score (.70), and attitude has the highest score (.83). It shows that all variables are reliable and can be used for analysis.

Preliminary testing was conducted to determine the symptoms of the influence of demographics on usage behavior. The purpose of this test is to provide an initial indication and increase the credibility of

research results in the demographics of research participants, which include gender, Bakorwil origin, and duration of use of the information system. The average behavior of using male operators (30.25) was higher than female operators (29.40). The independent sample *t*-test resulted in a *p* value of .35, so it can be said that there is no difference in the behavior of using male operators and female operators.

The Bakorwil origin also shows an insignificant difference. Testing with ANOVA showed that between groups showed a significance of $p = .07$. It means that the Bakorwil origin differences do not cause disparities in usage behavior. These results indicate the absence of demographic factors that affect endogenous variables.

This study measures and analyzes the acceptance of local governments management information systems and tests whether the variables in the TAM perform mediation function. The descriptive statistical data processing of variables is shown in Table 2.

The usefulness of having the respondent's answer value is 20. The average value obtained is 16.35. Respondents assessed the usefulness of the SIM in a good position. Similarly, for ease of use, respondents are ranked 12.54, meaning that MI has a perception of ease of use of respondents. The attitude to use goes beyond the midpoint. It can be said that the attitude of respondents always to use is relatively high. The average respondent's intention is around the number 4. Somewhat worried about the complexity aspect, respondents felt that the dimensions of SIM implementation were relatively high. The score reached 16.31 out of a maximum score of 25. It may be due to the many regulations in the management of regional finances. The average self-efficacy of the respondents also showed a moderate average of 35.49 out of a maximum of 50. Understanding of accounting and computer skills that must be owned by operators simultaneously is the cause. Meanwhile, the usage behavior score shows a high number. Some regulations require the use of MIS in utilizing this variable.

Table 2 shows that all standard deviation value is closer to the mean value, and the size of the data distribution is relatively reliable. The overall mean coincides with the median. It indicates that the data distribution is quite good, supported by relatively low skewness.

Table 2
Descriptive Statistic

Variables	Min	Max	Mean	Median	Dev. Std	Skewness
Usefulness	10	20	16.35	16	2.07	-.34
Ease of Use	6	15	12.54	13	1.79	-.69
Attitude toward Using	11	20	16.58	17	1.83	-.68
Intention to Use	18	30	24.48	24	2.81	-.09
Perceived complexity	10	20	16.31	16	2.14	-.31
Self-efficacy	24	45	35.49	36	4.05	-.56
Usage Behavior	10	20	16.65	17	2.23	-.44

Hypothesis Testing Results

Hypothesis testing was carried out by looking at the *t* statistic value and the *p* value. The research hypothesis can be accepted if the *p* value is <0.05. From the results of the research hypothesis testing model using SmartPLS 3.2.2, it can be seen that the direct effect of the relationship between the variables. Table 3 shows the relationship between variables.

The Mediation Effect Analysis

Analysis of the indirect effect in Table 4 shows that the indirect relationship between the two antecedent variables only occurs in the self-efficacy variable. This relationship is not in line with the technology acceptance model's predictions that assume that perceived usefulness and perceived ease of use are individual variables that influence the successful implementation of new technology. Table 4 shows that the indirect effect of the perceived complexity variable is not significant. Meanwhile, self-efficacy has been shown to influence the usage behavior through intention with .26 and the *p* value is .00.

Further Sobel testing is carried out to ascertain whether the intention is an intervening variable in the antecedent and consequent relationship (Maulina & Natakusumah, 2020). The Sobel test is carried out by testing the strength of the independent variable's indirect effect, namely self-efficacy, on the

dependent variable on usage behavior through the intention to use the variable. This relationship is shown in Figure 1.

Calculation of the Sobel value is done using online Soper's calculator (Abu-Bader & Jones, 2021). The relationship between self-efficacy and intention to use is .69 with a standard error of .069. Intention to usage behavior has a coefficient of .39 and a standard error of .078. Result of the calculation of the Sobel test is 3.90, $p < .001$. The intention to use is confirmed as a mediator in the relationship of self-efficacy to usage behavior.

Table 3
Hypotheses Testing

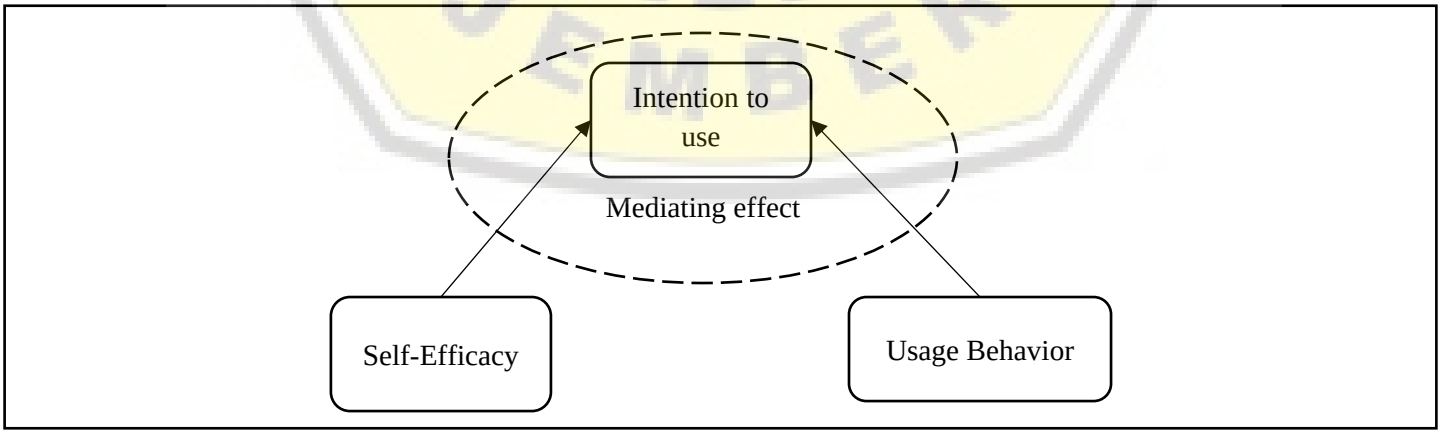
Path Coefficients	Original Sample	*t* value	*p*-value	Hypo-these	Conclusion
Self-efficacy → Usage Behavior	.69	1.97	.05*	H1	Accepted
Self-efficacy → Usefulness	.52	6.79	.00**	H2	Accepted
Self-efficacy → Intention to Use	.69	9.47	.00**	H3	Accepted
Perceived complexity→Usage Behavior	-.34	2.73	.01**	H4	Accepted
Perceived complexity → Usefulness	-.14	1.42	.16	H5	Rejected
Ease of Use → Usefulness	.53	5.87	.00**	H6	Accepted
Ease of Use → Attitude Toward Using	.09	.48	.64	H7	Rejected
Usefulness → Attitude Toward Using	.18	1.13	.26	H8	Rejected
Attitude toward Using → Intention to Use	.46	6.74	.00**	H9	Accepted
Intention to Use → Usage Behavior	.39	5.10	.00**	H10	Accepted

Table 4
Indirect Effect

Path Coefficients	Original Sample	*t* value	*p*-value
Self-efficacy → Intention → Usage Behavior	.26	4.59	.00**
Attitude → Intention →Usage Behavior	.18	3.98	.00**

Note. **significant at the 0.01 level

Figure 1
Mediating Effect



Discussion

This research uses a sample of regional information system operators in East Java, Indonesia, to identify the effect of behavioral factors on the successful implementation of mandatory local government information systems. The research seeks to evaluate the role of self-efficacy and perceived complexity in using actual information systems.

Based on testing the direct effect, self-efficacy directly impacts MIS use.

Hypothesis 1 that stated self-efficacy positively affects the usage behavior accepted. Using an information system shows the user's decision to use the information system in completing tasks (Aswar, 2020). They have confidence in their expertise in using the MIS to increase the efficacy that they can use it. This belief leads to a high level of user acceptance (Ho et al., 2019). Users do not hesitate to use it repeatedly. Repeated use without reluctance is an indicator of user satisfaction. These results align with previous research (Awofala et al., 2019). Awofala et al. (2019) found that self-efficacy is a critical factor that positively affects the intention to use the MIS. Self-efficacy affects usefulness and intention to use. The effect demonstrated by the regression coefficient is positive, meaning that the higher the self-efficacy, the usefulness, and the intention to use it increase. Employees who feel they can use the system get usefulness from using it in completing their work. In other words, if the employees' ability is low in using the system, the perceived usefulness will also decrease. The relationship between the self-efficacy variable and the intention to use shows a positive effect. Thus, hypothesis 2 is accepted.

Self-efficacy is defined as the level of confidence that a person can perform certain behaviors. According to Nagy (2018), self-efficacy means that a user has the confidence to use technological systems to complete work and perform tasks. Ease of use is the potential speed that can increase the intention to use information technology. According to Echchabi et al. (2019), they show that self-efficacy significantly affects the intention to use e-banking services. These results are also supported by (Mankad & Loechel, 2020), which stated that higher self-efficacy induces a more active learning process. Hypothesis 3 is accepted. Self-efficacy positively affects the perceived ease of use of management information systems in local government.

Perceived complexity had a negative influence on actual usage. Hypothesis 4 is accepted. In a mandatory system, the use of the system is more accurately approximated by user satisfaction. The perceived complexity of the information system has an impact on user satisfaction. Users who perceive information systems as complex will be dissatisfied and reluctant to use them. Its use is only to fulfill the task implementation. It indicates that the acceptance rate is low. They are used so that it is not efficient in completing the task.

The test results show that perceived complexity has a negative direct effect on MIS usage behavior. It confirms that there is a negative relationship between the perceived complexity and usage of the system. MIS users evaluate the consequences of their behavior related to their usefulness, so they choose a sound information system (Kahar et al., 2019). Information system perceived complexity relates to the ability to improve an individual's performance (Zarei et al., 2019). A simple system but efficient in supporting implementation is preferable to complex systems but challenging to operate. Perceived complexity has a negative effect on usage behavior. Users did not want to use application MIS features that are not accessible.

Implementing the system will make it easier for local governments and more effortless operation in managing strategic management. The MIS must be developed with a reliable design and competent human resources to achieve these goals. Simple features can quickly implement the interface, and precise management is more suited to operators. Assessment of the success after implementing the use of information systems is critical to analyze whether the application of the system is following its objectives.

The perceived complexity does not affect usefulness. Hypothesis 5 is rejected. The higher the perceived complexity, the perceived usefulness does not change. Only one application in the local government, namely MIS, is used for local financial management, from budgeting to financial statements preparation. Therefore, MIS users still have to use the system to complete their work even though the perceived complexity level of the MIS is high or low.

In the obligation to use a single software, perceived complexity is not a factor in user satisfaction due to the absence of comparison. The measurement of perceived complexity is based on the work results and how long it takes to complete. The level of perceived complexity is measured by the difficulty of computer technology to be understood and used by users. The system's perceived complexity in local governments is not one reason why users are reluctant to use it because it is mandatory software in local financial management.

Ease of use affects usefulness. The effect demonstrated by the regression coefficient is positive, meaning that the higher the ease of use, the higher the usefulness. It can be influenced by the

length of time that local government employees use the system, where MIS has been used from 2008 to the present, which results in users perceiving that MIS is easy to use because they already know its usefulness. Hypothesis 6 is accepted; perceived ease of use positively affects the perceived usefulness.

Ease of use can increase the intention to use information technology. The use of information technology can improve job performance. If users believe that it is easy to use information technology, they will use information technology to improve their performance. Some previous research explained a significant favorable influence between perceived ease of use and usefulness (Nanggala, 2020; Saadé et al., 2017).

Perceived usefulness of the system does not affect attitude toward use. Hypothesis 7 is rejected. It means that the higher the usefulness, the attitude toward using does not change. MIS has long been used in the local government for approximately 12 years, makes users familiar with and already know the usefulness of MIS. Thus, it prevents users from experiencing increased quality, effectiveness, and efficiency in completing their work.

Usefulness is considered a measure of user confidence that using information technology can improve job performance. Compared to not using information technology, work is more efficient and effective when done using information technology, and the work results are also better. MIS users' attitude to local governments is driven by how much user confidence using information systems can improve their performance. Ease of use does not affect usage attitudes; thus hypothesis 8 is rejected. The higher the ease of use, the attitude toward using does not change. It happens because the government has been obliged to use the system to manage local finances. Thus, most MIS users are not yet aware of the system's clarity of purpose and convenience. Therefore, local government employees often experience difficulties in completing their work correctly and on time. Attitudes toward using are defined as attitudes that indicate acceptance or rejection due to someone using information technology to complete their work. In the mandatory model, every employee must operate the MIS application without exception. Usage is not based on the ease of the system. It causes the ease of use has no impact on attitude.

The results demonstrated that the higher the attitude toward using, the higher the intention to use it; thus hypothesis 9 is accepted. There is a link between attitude and behavior towards an object. The MIS is the only system used to manage local government finances so that all local government employees are required to use the system. Thus, users have intended to implement the system in their daily activities to complete their work.

The user's attitude to the system is accepted or rejected due to a person using the system to complete their work. Intention to use information technology systems can be defined as behavior that tends to use information systems continuously. Intentions and attitudes are the basis for assessing the system's acceptance. The intention is also an essential part of the decision to accept the system or reject it. It is supported by (Nanggala, 2020) who found attitude toward using affects the intention to use. The intention to use affects the usage behavior. The effect shown by the regression coefficient is positive, meaning that the higher the intention to use it, the more its use will increase. Thus, hypothesis 10 is accepted.

The usage behavior assessment explains that there is an influence on repeated or frequent user intention in information technology systems. Someone feels satisfied if information technology systems are easy to use and can increase productivity, reflected in the actual usage. Usually, in the use of information technology systems, it can be seen from the amount of time and frequency when using the information technology system. It is supported by research that concluded that intention to use affects actual usage (Brusso, 2015; Liao et al., 2018).

These results in Table 4 indicate that TAM analysis is not sufficient to fully explain the mediation process in the application of the mandatory system (Sebetci, 2015). In mandatory systems, behavioral factors such as perceived ease of use, perceived usefulness, and attitudes are not causes for the acceptance of information systems. Acceptance is more influenced by variables related to users' psychological conditions. The TAM test cannot provide a comprehensive assessment due to limitations in this mandatory regulation. TAM does not provide a sufficient explanation about the relationship between factors that exist outside the TAM. Perceived usefulness and perceived ease of use certainly do not arise without causal variables. Other variables are then manipulated by the individual in the path of influence as hypothesized by TAM. Employees with a high computer level self-efficacy will have confidence and solve related to the

application of MIS, which directly affects the use of MIS. The result indicates that elements of user behavior become an essential variable in the implementation of the system. User interaction with MIS is influenced by one's belief in its capabilities. A person who has self-efficacy tends to accept the new system because it is challenging (Awofala et al., 2019).

Self-efficacy is a person's belief about his ability to perform certain behaviors or achieve specific goals. This belief has a meaningful impact, even as a significant motivator of one's success. A person who believes in his abilities or competencies in MIS that must be used to achieve goals can improve situations and overcome obstacles. In using MIS, individuals with high self-efficacy tend to choose to be directly involved and use it even though it is difficult. They do not view MIS as a threat they must avoid but instead develop an intrinsic interest and commitment to preventing possible failure (Nawangsih, 2020). Individuals with high self-efficacy perceive failure due to a lack of hard work, knowledge, and skills.

There is a significant relationship between self-efficacy and intention. The high self-efficacy possessed by the subject will be accompanied by a high intention to use MIS. Individuals who have strong beliefs and positive views about their abilities play a significant role in the intention to use MIS (Echchabi et al., 2019; Ferdousi, 2019). High self-efficacy is expressed in the form of incentives to engage in risk-taking behavior. In contrast to individuals with low self-efficacy, most do not have the courage and confidence to avoid risky choices that lead to failure. The intention to use MIS is driven by the individual's belief in his abilities. When the individual's feelings to control and direct the task increase, this becomes a significant determinant of intention to engage in behavior using MIS, so that intention to use MIS increases. Self-efficacy for using MIS is a substantial factor in individual intention (Suana, 2018). Individuals with high self-efficacy to use MIS will intend to be creative and dare to innovate in challenging activities in their environment.

The results explained a relationship between self-efficacy and usage behavior to use MIS. The intention to use SIM and self-efficacy simultaneously and partially can play a role in forming usage behavior. The previous research found the existence of a positive self-efficacy on the relationship between the intention to use SIM and usage behavior (Novariana & Andrianto, 2020). Relationship between self-efficacy and usage behavior mediated by the intention to use MIS. Users who show high self-efficacy, interest in task completion, a tendency to challenge, and an increased belief in the possibility of success in a task tend to have efficacy in all their abilities and skills in MIS tasks to some degree. The level of their intention will increase.

The results indicate that the mediation is a type of partial mediation (Novariana & Andrianto, 2020). There is an overlapping aspect between the self-efficacy variable and the intention to use MIS. The probability aspect of the success of the intention to use the MIS implies that individuals compare their perceived ability to perceived task difficulty. The finding can be used as an alternative new reference in further research on the concept of self-efficacy concerning the intention to use MIS and behavior in using MIS.

This study had notable limitations. Respondents are mandatory employees who use MIS. Careful interpretation is needed to interpret belief values, perceived complexity, and usage behavior. Due to these constraints, necessary must be taken in generalizing and confirming theories. Second, the distribution of online questionnaires provided coverage during the Covid pandemic, but the content validity test process has not been optimized. Third, not all variables that may affect the successful implementation of MIS are considered in this study. Further analysis indicates that the TAM analysis is not sufficient to explain the mandatory system's implementation fully. Future research needs to be carried out by considering the respondents' abilities and literacy so that conclusions can be more comprehensive.

Conclusion

This study integrates self-efficacy and perceived complexity to explain the level of system information acceptance. The results demonstrate and predict user acceptance or efficiency of technology. The results showed that self-efficacy affected perceived usefulness and behavioral intention to use, perceived ease of use involved perceived usefulness, attitudes towards use impacted behavioral intention to use, and behavioral intention to use affected actual system usage. Other hypotheses have failed to be accepted. TAM cannot fully explain the relationship between factors that exist outside the TAM in conditions where implementation is mandatory. Self-efficacy is important in this model.

Strengthening the efficacy increases the chances of successfully implementing new information systems.

The theoretical contribution of this study is to show the possibility of failure in TAM in the implementation of mandatory information systems. The reasoned action factor does not adequately explain the acceptance process. This research contributes to developing a new simple knowledge model for behavior using MIS in mandatory systems with the intention to use it as a mediating variable in self-efficacy and usage behavior. In-depth testing can be done to get a more comprehensive conclusion. The practical recommendation is the importance of increasing self-efficacy for the success of a program. The behavioral theory provides many detailed studies that self-efficacy is a cognitive process built from experience, knowledge, and training. It can be the government's choice to avoid the technology paradox: expensive technology investment but ineffective operation.

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PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15